

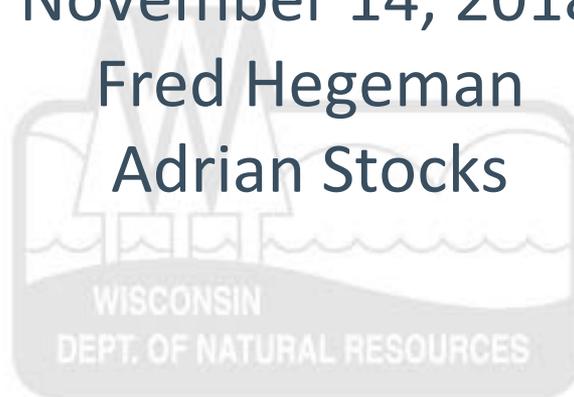
Current Trends & Strategy Development for Increasing Septage Disposal at Wastewater Treatment Facilities

Septage Study Group

November 14, 2018

Fred Hegeman

Adrian Stocks



Background

Background- Septage Regulations

- Latest major statute change
 - 2005 Act 347
- Recent major code changes
 - 1987
 - 1994
 - addition of 40 CFR 503 requirements
 - 2005
 - Changes in Maintenance, Treatment Plant requirements, Site approvals
 - Pending 2019/2020

Background-WWTF

- Solids
 - 40% of Capital Costs
 - Equipment for solids handling
 - 40% of Operating Costs
 - Power/Aeration
 - Material handling
 - Solids Handling
- Wastewater
- Holding Tank Wastes
 - Stronger-Water Conservation
- Septic Tank Wastes
 - More Solids, BOD, N, P
- Grease Interceptor wastes
 - More FOG, BOD
- Portable Restroom Wastes
 - More Debris, High N

Background-Maintenance Program

- 3 year cycle
- Little/No Differences for:
 - Number of Bedrooms
 - Number of Occupants
 - Seasonal/Permanent
- Counties implement differently
- Inspection vs. Pumping
 - Who can perform what?
 - Are they qualified?
 - What are they doing?
 - No set requirements

Background-Other Issues

- Land applied phosphorus from wastes contributes to:
 - Soils that are high in phosphorus concentrations
 - Eutrophication
 - Algae growth in surface waters
 - Dead zones
- Nutrient Management Plan Requirements
 - Current exemptions for septage

Background-Septage Servicing

- Trucks Expensive
 - New
 - Used
- Land Application w/ road truck increases vehicle maintenance costs
- Many haulers wish to “pump”, “haul” and “dispose”
- “Disposal” at WWTF when available and if not costly
- Land application out of necessity...no other reasonable options
 - Storage (Small/Larger)
 - Direct Land Application
- Easier disposal solutions favor large companies
- Expertise & problem solving keeps smaller companies in the “game”

Trends

Trends-Wastewater Treatment Fac

- Larger Treatment Facilities have ability to accept outside wastes
- Facilities are not always accepting outside wastes
 - Ex: Stevens Point
- Many Treatment Plants use contractors for sludge disposal
 - Ex: Bytec, PATS, United, etc
- Treatment Plants answer to rate payers & “owners”
- Limit wastes due to:
 - Late Payers
 - Folks that create messes
 - Easier to eliminate all then to put one entity on the spot
- More stringent phosphorus discharge limits
 - \$\$ to treat wastes
- Septage Receiving Evaluation Requirement
 - “Chicken & Egg”
 - Who will commit?
- Septage Receiving Stations

Trends-Septage

- Septage Characteristics
 - Less solids
 - Less nitrogen
 - Nutrient Loading
 - Nitrogen ~Phosphorus
 - Crop uptakes—
 - 4 +/- time more N needed
- More Grease Generated
 - Collection Systems regulating
 - Restaurants, delis, other
 - Costs associated with collection system maintenance
- No. of Septage Businesses are decreasing
 - Fewer businesses
 - Larger trucks
 - Similar numbers of trucks
- Newer Operators
 - Businesses are being transferred

Trends-Septage (Cont)

- General Increase in Disposal Volumes at WWTFs
- Fewer Land Application Sites available...competition from
 - Animal wastes
 - Industrial wastes
 - Contract Haulers
 - Development
- More difficult to obtain Land Application Sites
 - Good sites no longer readily available
 - Site Reviews follow code requirements
- Increase in No. of Portable Restroom Servicing Companies
 - Out of State
 - More folks use them

Strategies

Potential Strategies

- Who?
 - Department
 - Septage Industry
 - Treatment Facilities
 - Other State Agencies
 - DSPS
 - DATCP
 - Counties
 - Equipment Manufacturers
 - Pre-Treatment
 - Solids Removal
 - Investors
 - Researchers
- What?
 - Focus on Incremental increases at WWTF
 - Add one or two loads per day at small WWTFs?
 - What do WWTFs need?
 - Equipment?
 - Monitoring Incoming Wastes
 - Ordinance Assistance?
 - Better Monitoring of incoming wastes or a protocol
 - Incentives to accept more septage
 - Assist facilities w/ adhering to s. 281.49 Wis. Stats.

Potential Strategies

- What? (cont)
 - Focus on reducing septage generated
 - Inspection instead of Pumping
 - Develop consistent Pumping (Cleaning) Guidelines
 - Inspection vs Content Removal
 - Convert Holding Tanks to other types of POWTS
 - Research
 - GW protection/public health concerns
 - Re-Consider Maintenance requirements
 - Convert 3 year cycle to??
 - Use usage/solids accumulation rather than time?
 - Additional Funding mechanisms for local maintenance programs
 - Revise billing process?
 - Evaluate maintenance costs of POWTS
 - Compare to “city sewer” charges
 - How can this information be used?
 - WWTF charges?
 - Tax/Fees for implementing funds for storage, other?

Potential Strategies

- What (Cont)
 - Reassess land application
 - Is it still beneficial
 - Nitrogen is less
 - Phosphorus is a concern
 - Is there a better way?
 - Septage Only Treatment Facilities
 - Explore these options
 - Michigan did this
 - What do other states do?

Specific Strategies

- WWTF Survey - underway
 - Needs to be representative
 - Mapped by region/county
 - DNR is working on survey for all wastewater treatment facilities
 - Which WWTFs accept septage?
 - What kind of septage is accepted?
 - Types of Septage Receiving stations
 - Rates
 - Concerns
- Survey Goals
 - What works?
 - What is needed?
 - Receiving and Treatment Equipment
 - Billing
 - Buy-in from “owners” and “rate payers”
 - Buy in from “operators”
 - What can be learned
 - What can be shared?

Specific Strategies

- Funding for septage receiving stations
 - Revolving Loan Program
 - Community Assistance
 - Low Interest Loans
 - Loan Forgiveness